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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,180	04/18/2000	Gary Greenberg	GB0002	2294

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10/03/2002

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EXAMINER

ROWE, JESSE C

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/552,180

Applicant(s)

GREENBERG, GARY

Examiner

Jesse C Rowe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/30/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 8-12, 14-21, 24, 25 and 37-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 13, 22, 23 and 26-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

Applicant's election with traverse of species X in Paper No. # 3 is acknowledged. The traversal is on the ground(s) that Species I, II, III, IV, and V are drawn to an endoscope is not consistent with the claims, separating dependent claims from their independent claims does not meet the requirement for restriction and the differences between the species would be a matter of design choice.

This is not found persuasive because applicant points out that the characterization of the species being an endoscope is incorrect because claims 1-41 are not specifically limited thereto. The examiner acknowledges that same claims are broader than the language used to characterize the species; however, this does not negate the fact that the claims read on the identified species. The applicant argues that the dependent claims must be included with their independent claims for a restriction to be proper. The examiner disagrees. A claim is restrictable based on mutually exclusive subject matter claimed not on its status as a dependent or independent claim. The claims specifically identified are generic to all species except Species XI. As such, it is proper to include these claims; however, each of the dependent claims includes further limitations that establish limitation drawn mutually exclusive subject matter. Therefore, the dependent claims are properly restricted. The applicant has set forth that the differences between the species would be a matter of design choice, but has not specifically made a statement that the species are obvious variants. As such, the species are distinct and independent as identified.

The requirement is still deemed proper and is therefore made FINAL.

Applicant has mistakenly left out claim 26 as being included with the claims under Species X.

Claims 8-12, 14-21, 24-25 and 37-50 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species I-IX and XI, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. # 3.

Specification

The abstract of the disclosure is objected to because:

On page 8, lines 15-26, items 49 and 51 are first referred to as eye-points then later referred to as objective apertures. It is unclear what the applicant intends items 49 and 51 to refer to as, eye-points or objective apertures.

On page 4, line 4, "Figure 2b" should read "Figure 2a"

On page 4, line 15, "LCD" should read "LED", see page 8, lines 8-14.

On page 6, line 16, Figure 6 is not labeled as Prior Art. Re-label Figure 6 to state it is prior art.

On page 13, line 15, replace "XX/XXX,XXX for XXX, filed on XXX" with correct text.

On page 15, line 35, 179a should be labeled in Figure 24.

Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 32, 27 and 28 objected to because of the following informalities:

Regarding claim 32, "os" is a typo and for examination purposes has been interpreted as "of".

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Regarding claims 27 and 28, the limitation "one objective aperture" in claim 27, lines 36, line 1; claim 28, lines 5 and 6 is ambiguous. Applicant previously recited an objective aperture in claim 22, it is unclear if the applicant is referring back to previously disclosed object aperture or a distinct element therefrom.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 rejected under 35 U.S.C. 112, first paragraph, claim 6 requires that the objective aperture be at the eye point. As illustrated in Figure 6, the eye point (49 or 51) is outside the device. Therefore, it is unclear how the objective aperture is capable of being positioned at the identified eye point.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-7, 13, 22-23, 26-29 and 31 rejected under 35 U.S.C. 102(b) as being anticipated by Kuo et al (USPN 5,351,152).

Kuo et al discloses an optical system for viewing an object (Figure 6) and having an objective aperture (area where the dynamic aperture mask 170 is positioned) through which light passes. Kuo et al also discloses a means for continuously changing the portion of the objective aperture through which light passes (Figure 6, dynamic aperture mask 170). Kuo et al also discloses wherein the optical system is further described as having a viewing path (path from eyepieces 152 and 154 to specimen 130 in Figure 6) and the objective aperture is in the viewing path (Figure 6); wherein the optical system is further described as having an illumination path (path from illuminating light source 118 to specimen) and the objective aperture is in the illumination path (Figure 6); wherein the illumination path is further described as including a light source (118) and the objective aperture is between the light source and the object (Figure 6, object 130); wherein the viewing path is further described as including an eye point (eye point is behind the eyepiece where the light is focused) and the objective aperture is between the eye point and the object (Figure 6); and wherein the viewing path is further described as including an

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eye point (point in plane of dynamic aperture mask 170 where light from the object 130 is focused via lens 122) and the objective aperture is at the eye point (Figure 6). In light of the rejection of claim 6 under 35 U.S.C. 112, first paragraph, the definition of eye point is not clear. As such, the examiner is interpreting the eye point to be any point at which the eye could view a focused image. As illustrated in Figure 6, the objective aperture is positioned at an eye point within this definition. Kuo et al also discloses an optical system for viewing an object (130) and having an objective aperture (area where the dynamic aperture mask 170 is positioned) through which light passes, the improvement comprising: a dynamic aperture mask (170) disposed at the objective aperture. Kuo et al also discloses a method for creating a 3-D view of an object (130) in an imaging system having an objective aperture (area where the dynamic aperture mask 170, 174 and illumination light source 118 are positioned) through which light passes, the steps comprising: causing the light to pass through only a portion of the objective aperture (area where the dynamic aperture mask 170, 174 and illumination light source 118 are positioned); and continuously changing the portion of the objective aperture through which light passes (Figure 6). Kuo et al also discloses wherein a dynamic aperture mask (170) is used to cause the light to pass through only a portion of the objective aperture; wherein a shaped beam (light through objective lens 122 from object 130 and being shaped by objective lens 122) is used to cause the light to pass through only a portion of the objective aperture; and wherein the imaging system is a light microscope (Figure 6) having an illumination path including at least one objective aperture (area where the dynamic aperture mask 170, 174 and illumination light source 118 are positioned) and a viewing path having at least another objective aperture wherein the objective aperture through which light passes through only a portion is in the illumination path (168).

Regarding claim 29, Kuo et al also discloses wherein the objective aperture (area where the dynamic aperture mask 174 and illumination light source 118 are positioned) is in the light source.

Regarding claim 31, Kuo et al also discloses wherein the objective aperture (area where the dynamic aperture mask 174 is positioned) is “at” an eyepiece (152 or 154). The objective aperture is close enough to the eyepiece to be “at” the eyepiece.

Claims 1-6 rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi (USPN 6,028,306).

Hayashi discloses an optical system for viewing an object and having an objective aperture through which light passes (area where aperture mask 34 is positioned), the improvement comprising: means continuously changing the portion of the objective aperture through which light passes (Figure 5). Hayashi also discloses wherein the optical system is further described as having a viewing path (path between image sensor 42 and object 47) and the objective aperture is in the viewing path (Figure 5); wherein the optical system is further described as having an illumination path (path from illuminating light source 31 to object 47) and the objective aperture is in the illumination path (Figure 3); wherein the viewing path is further described as including an eye point (point where light rays are focused at image sensor 42) and the objective aperture is between an eye point and the object (Figure 3); and wherein the viewing path is further described as including an eye point (point where light rays are focused at aperture 34) and the objective aperture is at an eye point (Figure 5). In light of the rejection of claim 6 under 35 U.S.C. 112, first paragraph, the definition of eye point is not clear. As such, the

examiner is interpreting the eye point to be any point at which the eye could view a focused image. As illustrated in Figure 5, the objective aperture is positioned at an eye point within this definition.

Claims 1-7 rejected under 35 U.S.C. 102(e) as being anticipated by George (USPN 6,038,067).

George discloses an optical system for viewing an object and having an objective aperture through which light passes (area where aperture mask 32 is positioned), the improvement comprising: means continuously changing the portion of the objective aperture through which light passes (column 7, lines 27-30; to optically scan, the aperture mask 32 must continuously change the portion that light passes through it). George also discloses wherein the optical system is further described as having an illumination path (path from illuminating light source 11 to object 15) and the objective aperture is in the illumination path (Figure 3).

Regarding claim 2, George discloses wherein the optical system has a viewing path (optical path between the specimen 15 and the detector 18) and the objective aperture (area where the dynamic aperture mask 21 is positioned) is in the viewing path (Figure 2).

Regarding claim 5, George discloses wherein the viewing path is further described as including an eye point (eye point is behind the eyepiece where the light is focused) and the objective aperture is between the eye point and the object (Figure 2).

Regarding claim 6, George discloses wherein the viewing path is further described as including an eye point (point in plane of dynamic aperture mask 21 where light from the object 15 is focused via lens 16) and the objective aperture is at the eye point (Figure 2). In light of the

rejection of claim 6 under 35 U.S.C. 112, first paragraph, the definition of eye point is not clear. As such, the examiner is interpreting the eye point to be any point at which the eye could view a focused image. As illustrated in Figure 2, the objective aperture is positioned at an eye point within this definition.

Regarding claim 7, George discloses an optical system for viewing an object (Figure 2) and having an objective aperture (area where the dynamic aperture mask 21 is positioned) through which light passes, the improvement comprising: a dynamic aperture mask (21) disposed at the objective aperture.

Claims 1, 2 and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Mundkur (USPN 3,671,754).

Mundkur discloses an optical system for viewing an object and having an objective aperture through which light passes (area where aperture masks 10 and 12 are positioned), the improvement comprising: means continuously changing the portion of the objective aperture through which light passes (Figure 1). Mundkur also discloses wherein the optical system is further described as having a viewing path (path between photo tube 6 and object 36) and the objective aperture is in the viewing path (Figure 1); wherein the viewing path is further described as including an eye point (point where light rays are focused at photo tube 6) and the objective aperture is between an eye point and the object (Figure 1). In light of the rejection of claim 6 under 35 U.S.C. 112, first paragraph, the definition of eye point is not clear. As such, the examiner is interpreting the eye point to be any point at which the eye could view a focused

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image. As illustrated in Figure 1, the objective aperture is positioned at an eye point within this definition.

Claims 1-7 rejected under 35 U.S.C. 102(b) as being anticipated by Kino et al (USPN 4,927,254).

Kino et al discloses an optical system for viewing an object and having an objective aperture through which light passes (area where aperture mask 21a is positioned), the improvement comprising: means continuously changing the portion of the objective aperture through which light passes (Figure 6). Kino et al also discloses wherein the optical system is further described as having a viewing path (path between eyepiece and object 27) and the objective aperture is in the viewing path (Figure 6); wherein the optical system is further described as having an illumination path (path from illuminating light source 22a to object 27) and the objective aperture is in the illumination path (Figure 6); wherein the viewing path is further described as including an eye point (point where light rays are focused at eyepiece) and the objective aperture is between an eye point and the object (Figure 6); and wherein the viewing path is further described as including an eye point (point where light rays are focused at aperture 21a) and the objective aperture is at the eye point (Figure 6). In light of the rejection of claim 6 under 35 U.S.C. 112, first paragraph, the definition of eye point is not clear. As such, the examiner is interpreting the eye point to be any point at which the eye could view a focused image. As illustrated in Figure 5, the objective aperture is positioned at an eye point within this definition.

Regarding claim 7, Kino et al discloses an optical system for viewing an object (Figure 6) and having an objective aperture (area where the dynamic aperture mask 21a is positioned) through which light passes, the improvement comprising: a dynamic aperture mask (21a) disposed at the objective aperture.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al in view of Mundkur (USPN 3,671,754).

Kuo et al discloses a light microscope having an image receiving system, which is “at” the objective aperture, in that they are in close proximity. Kuo et al lacks the image receiving system being a photo tube. Mundkur discloses that in a scanning system, the image receiving system being a photo tube (6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Kuo to utilize a photo tube for receiving the images as taught by Mundkur for the purpose of recording the images received.

Regarding claim 13, Kuo et al discloses the claimed invention except for the aperture size being adjustable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the aperture size adjustable, since it has been held that

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adjustability, where needed, involves only routine skill in the art. One would have been motivated to make the aperture size adjustable for the purpose of changing the image's brightness.

Claims 32-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al in view of Kimura (USPN 5,168,157).

Kuo et al discloses a microscope (Figure) having a light source (118) with an objective aperture (area where the dynamic aperture mask 170 is positioned) through which light is directed and a means for continuously changing the portion of the objective aperture through which light passes. Kuo et al lacks the microscope being a phase contrast microscope. Kimura discloses wherein a microscope which is a phase contrast microscope (Figure 14; column 21, lines 8-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the microscope of Kuo to be a phase contrast microscope as taught by Yonekubo to enable visualizing transparent specimens.

Regarding claim 36, Kuo et al in view of Kimura discloses the claimed invention except for the aperture size being adjustable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the aperture size adjustable, since it have been held that adjustability, where needed, involves only routine skill in the art. One would have been motivated to make the aperture size adjustable for the purpose of changing the image's brightness.

Conclusion

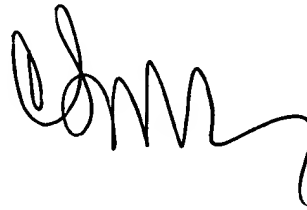
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse C Rowe whose telephone number is (703)305-7018. The examiner can normally be reached on Regular M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703)308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-7018 for regular communications and (703)305-7018 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-7018.

Jesse Rowe

September 30, 2002

A handwritten signature in black ink, appearing to read 'C. Spyrou', with a long horizontal flourish extending to the right.

**Cassandra Spyrou
Supervisory Patent Examiner
Technology Center 2800**